



Source Term Path Forward

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*Providing for safe,
efficient disposition of
DOE spent nuclear fuel*

Presentation outline

- Purpose of the DOE SNF source term
- Participants involved with this effort
- Activities completed in the last FY
- Source term supports the LA and WA strategy
- Activities planned for FY 2001



Source term purpose

- DBE analyses (BDBE)
- TSPA-SR/LA analyses (beyond regulatory period)
- Other potential uses
 - Waste acceptance
 - Interim storage SAR
 - Validate DOE SNF Inventory for YM EIS



Participants

- National SNF Program - Brett Carlsen (Lead)
- Jim Sterbentz
- Hanford - Bruce Makenas
- INEEL - Denney Fillmore
- SRS - Fred Rhode (Brian Eberhard)
- ANL - Dick McKnight
- RW M&O - Don Nitti



Activities completed

- January 2000 - DOE/SNF/REP-055 “Methodologies for Calculating DOE Spent Nuclear Fuel Source Terms”
- July 2000 - DOE/SNF/REP-059 “Guide for Estimating DOE Spent Nuclear Fuel Source Terms”



Report -055 purpose

- DOE/SNF/REP-055 provides historical background for DOE SNF source term calculations.
 - Code(s) used and calculational basis for source terms used for present fuel storage and handling operations at each site
 - Verification and validation work completed (or planned) for site methodologies.



Report -059 purpose

- DOE/SNF/REP-059 provides a uniform process for each site to:
 - document and/or develop radionuclide estimates for each fuel.
 - consolidate and present this information to support repository design and licensing analyses and certification for disposal.

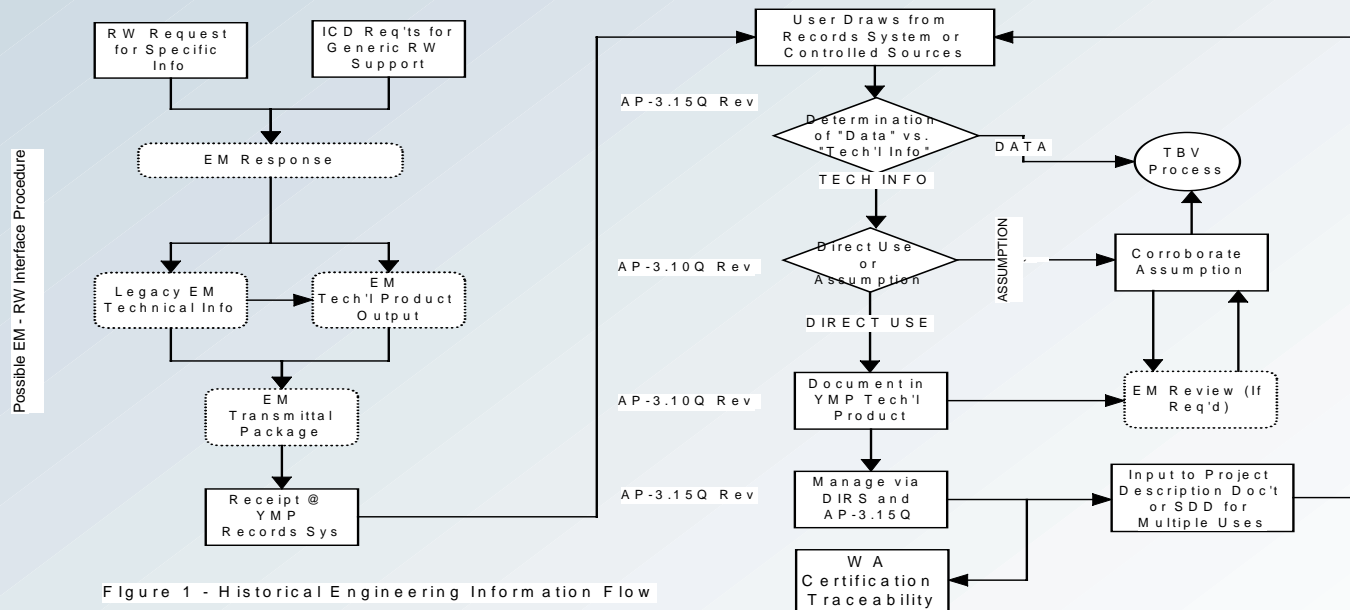


Methodology

- Gather fuel and burnup information
- Select bounding template
- Calculate scaling factor
- Calculate and record radionuclide inventory
- Obtain concurrence
- Submit estimate and documentation



Interface with RW



Activities in FY 2001

- Identify fuel templates required to support repository disposal
- Identify responsible site to develop each fuel template
- Associate each DOE fuel with an appropriate fuel template



Activities in FY 2001 (continued)

- Complete a documented source term report based on the process described in DOE/SNF/REP-059
 - Ambitious -- but important
 - Will require site support (currently funded by NSNFP).
- Submit all three reports to YMP record system for RW's use.



Conclusion

- Each site must continue (and increase) support for the source term effort.
- A uniform process will be used to document the DOE SNF source term.
- Source term report will be transmitted for RW use in design and licensing analyses and for eventual certification for acceptance of DOE SNF.

